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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,181	11/28/2000	Robert Edward Meredith Swann	R&G C-312	7754

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EXAMINER

BLACKMAN, ANTHONY J

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/724,181

Applicant(s)

SWANN ET AL.

Examiner

ANTHONY J BLACKMAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: CLUSTER IMAGE PROCESSING THROUGH MERGING OBJECTS (OBJECT DIFFERENTIATION) AND DETERMINATION OF BOUNDARY DATA MEANS OF MULTI-LEVEL (GREYSCALE/SEGMENTATION) OF DIGITAL IMAGES.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 recites the limitation "the image" in line 10. There is insufficient antecedent basis for this limitation in the claim. Because the relation between "A method for processing images..." may refer to a plurality of one type of image claimed as "images" or different images. Further, Claim 9 recites the limitation "the original image" in line 15. There is insufficient antecedent basis for this limitation in the claim. Further, claims 10-16 are dependent upon claim 9 and are also rejected. Examiner interprets claims 9-16 as best understood.

- 3.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)). Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by NICHANI, US Patent No. 6,259,827.

4. As per claims 1 and 9, NICHANI teach an image processing system for producing clusters for related objects for subsequent analysis (column 2, lines 3-31, column 3, lines 29-42, further, the clustering as disclosed by NICHANI results from the GTC processing. Other examples of initialized cluster processing are shown in figures 3a-3f and 4), comprising, means for supplying a multi-level digital representation of the image (figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42), means for identifying predetermined objects in the image and supplying data defining their locations ((figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42), means for deriving boundary data from the multi-level digital representation ((figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42), the boundary data representing boundaries between different regions of the image (figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42), means for clustering the predetermined objects into groups in dependence on their proximity to each other (figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42) and in dependence on the boundary data (figures 3a-

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3f and 4, column 2, lines 3-31, column 3, lines 29-42), and means for supplying data relating to the groups for subsequent analysis (figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42).

5. As per claims 2 and 10, NICHANI meets limitations of claims 1 and 9, including "...the boundary data is derived from another representation of the image (figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42). "

6. As per claims 3 and 11, NICHANI meets limitations of claims 1 and 9, including "...the boundary data is derived from a separate source containing data relating to the image (figure 4, element 120, column 7, lines 43-52)."

7. As per claims 4 and 12, NICHANI meets limitations of claims 1 and 9, including "...the boundary data is derived from background data from the multi-level digital representation (figures 3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42)."

8. As per claims 5 and 13, NICHANI meets limitations of claims 4 and 12, including "...the background data is color data [black and white and background/greyscale represent background color as claimed] (figures 3a-3f and 4, element 118, column 1, lines 54-64, column 2, lines 3-31, column 3, lines 29-42)."

9. As per claims 6 and 14, NICHANI meets limitations of claims 4 and 12, including "...the background data is greyscale data (figures 3a-3f and 4, element 118, column 1, lines 54-64, column 2, lines 3-31, column 3, lines 29-42)."

10. As per claims 7 and 15, NICHANI meets limitations of claims 1 and 12, including "...the means for clustering objects together clusters objects which are separated by less than a predetermined limit (the predetermined limits in multi-level/binarized (figure

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4, element 18) representations are represented as 0's and 1's, the OR/Boolean/Binary processing creates an arbitrary threshold of either 0 or 1. Therefore, the other value is always above or below the threshold depending on the reference value figures (3a-3f and 4, column 2, lines 3-31, column 3, lines 29-42)."

11. As per claims 8 and 16, NICHANI meets limitations of claims 1 and 10, including "...clustering objects together clusters objects which are not separated by any boundary defined by the boundary data" (examiner interprets NICHANI (column 2, lines 2-31) to disclose that it is inherent that segmentation of a group of clustered objects that is without defects/differences will be placed in one general region or only one segmentation. Therefore, the clustering takes place in one area or boundary and has no boundary because there is only one boundary."

Conclusion

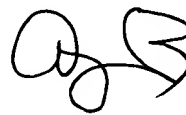
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. NISHIKAWA et al, US Patent No. 5,740,268 disclose a clustering technique similar to the instant application (figure 1). ANCIN et al, US Patent No. 6,038,340.

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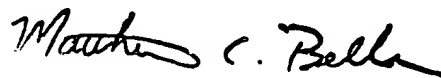
Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J BLACKMAN whose telephone number is 703-305-0833. The examiner can normally be reached on FLEX SCHEDULE.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 703-308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



ANTHONY J BLACKMAN
Examiner
Art Unit 2676



MATTHEW C. BELLA
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